CLAIMS

What is claimed is:

5

- 1. An organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:
 - (a) a charge transport material having the formula

$$Z \subset N-N-X-V$$

where R_1 and R_2 are, independently, H, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, hydroxyl group, thiol group, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

V comprises a vinyl ether group; and

Z comprises an (N,N-disubstituted) arylamine group; and

- (b) a charge generating compound.
- 20 2. An organophotoreceptor according to claim 1 wherein X is CH₂CH₂.
 - 3. An organophotoreceptor according to claim 2 wherein V is O-CH₂=CH₂.
- 4. An organophotoreceptor according to claim 1 wherein the charge transport25 material has a formula selected form the group consisting of the following:

Attorney Docket No.: 3216.32US01 (SIL-03-144)

$$\bigcap_{C_2H_5} \bigcap_{N} \bigcap_{N}$$

- 5. An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a second charge transport material.
 - 6. An organophotoreceptor according to claim 5 wherein the second charge transport material comprises an electron transport compound.
- 7. An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a binder.
 - 8. An electrophotographic imaging apparatus comprising:
 - (a) a light imaging component; and
- (b) an organophotoreceptor oriented to receive light from the light imaging component, the organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:
 - (i) a charge transport material having the formula

$$Z \subset N-N-X-V$$

20

where R_1 and R_2 are, independently, H, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is

optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR_3 group, a CHR_4 group, or a CR_5R_6 group where R_3 , R_4 , R_5 , and R_6 are, independently, H, hydroxyl group, thiol group, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

5 V comprises a vinyl ether group; and

Z comprises an (N,N-disubstituted)arylamine group; and

- (ii) a charge generating compound.
- 9. An electrophotographic imaging apparatus according to claim 8 wherein X is 10 CH₂CH₂.
 - 10. An electrophotographic imaging apparatus according to claim 9 wherein V is O-CH₂=CH₂.
- 11. An electrophotographic imaging apparatus according to claim 8, wherein the charge transport material has a formula selected form the group consisting of the following:

$$\bigcap_{C_2H_5} \bigcap_{N} \bigcap_{N}$$

- 20 12. An electrophotographic imaging apparatus according to claim 8 wherein the photoconductive element further comprises a second charge transport material.
 - 13. An electrophotographic imaging apparatus according to claim 12 wherein second charge transport material comprises an electron transport compound.

25

5

15

20

- 14. An electrophotographic imaging apparatus according to claim 8 further comprising a liquid toner dispenser.
 - 15. An electrophotographic imaging process comprising;
- (a) applying an electrical charge to a surface of an organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising
 - (i) a charge transport material having the formula

$$Z \subset N-N-X-V$$

where R_1 and R_2 are, independently, H, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula $-(CH_2)_m$ -, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, hydroxyl group, thiol group, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

V comprises a vinyl ether group; and

Z comprises an (N,N-disubstituted)arylamine group; and

- (ii) a charge generating compound.
- (b) imagewise exposing the surface of the organophotoreceptor to radiation to dissipate charge in selected areas and thereby form a pattern of charged and uncharged areas on the surface;
 - (c) contacting the surface with a toner to create a toned image; and
- 25 (d) transferring the toned image to substrate.
 - 16. An electrophotographic imaging process according to claim 15 wherein X is CH₂CH₂.

Attorney Docket No.: 3216.32US01 (SIL-03-144)

- 17. An electrophotographic imaging process according to claim 16 wherein V is O-CH₂=CH₂.
- 18. An electrophotographic imaging process according to claim 15 wherein the
 5 charge transport material has a formula selected from the group consisting of the following:

$$\bigcap_{C_2H_5} \bigcap_{N} \bigcap_{N}$$

- 19. An electrophotographic imaging process according to claim 15 wherein the photoconductive element further comprises a second charge transport material.
 - 20. An electrophotographic imaging process according to claim 19 wherein the second charge transport material comprises an electron transport compound.
- 15 21. An electrophotographic imaging process according to claim 15 wherein the photoconductive element further comprises a binder.
- 22. An electrophotographic imaging process according to claim 15 wherein the toner comprises a liquid toner comprising a dispersion of colorant particles in an organic
 20 liquid.
 - 23. A charge transport material having the formula

$$Z = N-N-X-V$$

where R_1 and R_2 are, independently, H, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula - $(CH_2)_m$ -, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, hydroxyl group, thiol group, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

V comprises a vinyl ether group; and

- Z comprises an (N,N-disubstituted)arylamine group.
 - 24. A charge transport material according to claim 23 wherein X is CH₂CH₂.
 - 25. A charge transport material according to claim 24 wherein V is O-CH₂=CH₂.
 - 26. A charge transport material according to claim 23 wherein the charge transport material has a formula selected from the group consisting of the following:

$$\bigcap_{C_2H_5} \bigcap_{N} \bigcap_{N}$$

15

5